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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,043	08/28/2001	Gordon Taylor Davis	RAL920010013US1	5730

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EXAMINER	
TRAN, NGHI V	

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/941,043	DAVIS ET AL.	
	Examiner	Art Unit	
	Nghi V. Tran	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8-14 and 17-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8-14 and 17-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 11, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franaszek et al., U.S. Patent No. 5,870,036 (hereinafter Franaszek), in view of Woodward et al., U.S. Patent No 6,151,318 (hereinafter Woodward).

3. With respect to claims 1, 11, and 18-19, Franaszek teaches a method for compressing data [see abstract], the data including a plurality of segments [210 i.e. data blocks], each of the plurality of segments including a first end and a second end, the method comprising the steps of:

- representing the first end of a segment [205 and/or 235 i.e. type and/or CMD] of the plurality of segments with a partition compression code word [col.4, ln.25 - col.5, ln.64 i.e. a partition compression code word = identified by an index], the segment being at least one of an ATM cell, an ATM PDU and an IP packet [210 i.e. data blocks], the first end being a boundary of the ATM cell, the ATM PDU, or the IP packet [figs.2-3];

- compressing a remaining portion of the segment [fig.4].

However, Franaszek does not explicitly show a method for compressing data for transmission using asynchronous transfer mode (ATM) [see abstract and figs.1-4].

In a method for compressing data, Woodward teaches a method for compressing data [col.4, lns.23-35] for transmission using asynchronous transfer mode (ATM) [see abstract and figs.1-4].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Franaszek in view of Woodward by compressing data for transmission data using ATM because this feature . It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to increase the apparent bandwidth of the system [Woodward, see abstract].

4. With respect to claim 2, Franaszek further teaches repeating the representing and compressing steps for each of a remaining portion of the plurality of segments [fig.4B step 449].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over both Franaszek and Woodward as applied to claims 1 and 11 above, and further in view of Peterson et al., U.S. Patent No. 5,822,321 (hereinafter Peterson).

7. With respect to claims 3 and 12, both Franaszek and Woodward do not explicitly teaches the first end is a start of the segment.

In a communication method, Peterson discloses the first end is a start of the segment [fig.5 i.e. first segment].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify both Franaszek and Woodward, and further in view of Peterson by specifying the first end as a start of the segment because this feature improves the efficiency of the data transmission for segmenting data transmission packets into smaller packets [Peterson, col.1, lns.8-11]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to maximize bandwidth based on the compression of user data (e.g., voice data into small data packets [Peterson, col.1, lns.21-29].

8. Claims 4-5 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over both Franaszek and Woodward as applied to claims 1 and 11 above, and further in view of Seroussi et al., U.S. Patent No. 5,389,922 (hereinafter Seroussi).

9. With respect to claims 4 and 13, both Franaszek and Woodward do not explicitly teach the partition compression code word represents a partition command sequence.

In a method for compression data, Seroussi discloses or suggests the partition compression code word represents a partition command sequence [fig.2 and col.4, lns.12-24].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify both Franaszek and Woodward, and further in view of Seroussi by representing the partition compression code word as a partition command sequence because this feature encoded as a series of codes [Seroussi, col.4, lns.15-17]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to reduce the amount of memory required in a dictionary based compression/decompression system [Seroussi, col.3, lns.20-22].

10. With respect to claims 5 and 14, both Franaszek and Woodward do not explicitly teach providing a compound compression code word to represent the partition command sequence and another portion of the segment, the partition command sequence representing the first end of the segment.

In a method for compression data, Seroussi discloses or suggests providing a compound compression code word to represent the partition command sequence and another portion of the segment, the partition command sequence representing the first end of the segment [fig.2 and col.4, lns.12-24].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify both Franaszek and Woodward, and further in view of Seroussi by representing the partition compression code word as a partition command sequence because this feature encoded as a series of codes [Seroussi, col.4, lns.15-17]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to reduce the amount of memory required in a dictionary based compression/decompression system [Seroussi, col.3, lns.20-22].

11. Claims 8-10, 17, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodward, and further in view of Seroussi.

12. With respect to claims 8-10, 17, and 20-22, Franaszek teaches a method for compressing data [see abstract], the data including a plurality of segments [210 i.e. data blocks], each of the plurality of segments including a first end and a second end, the method comprising the steps of:

- representing the first end of a segment [205 and/or 235 i.e. type and/or CMD] of the plurality of segments with a partition compression code word [col.4, ln.25 - col.5, ln.64 i.e. a partition compression code word = identified by an index], the segment being at least one of an ATM cell, an ATM PDU and an IP packet [210 i.e. data blocks], the first end being a boundary of the ATM cell, the ATM PDU, or the IP packet [figs.2-3];
- compressing a remaining portion of the segment, if any [fig.4].

However, Franaszek does not explicitly show a method for compressing data for transmission using asynchronous transfer mode (ATM) [see abstract and figs.1-4].

In a method for compressing data, Woodward teaches a method for compressing data [col.4, lns.23-35] for transmission using asynchronous transfer mode (ATM) [see abstract and figs.1-4].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Franaszek in view of Woodward by compressing data for transmission data using ATM because this feature . It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to increase the apparent bandwidth of the system [Woodward, see abstract].

In addition, both Franaszek and Woodward do not explicitly teach adding bytes to a string including the command sequence representing the first end of the segment until the string does not have a match in the dictionary; adding a code word to the dictionary, the code word including the partition command sequence as a root, the code word representing the string if the string is obtained in a first iteration; utilizing the code word in the dictionary to represent the string if the string is not obtained in the first iteration.

In a method for compressing data, Seroussi suggests adding bytes to a string including the command sequence representing the first end of the segment until the string does not have a match in the dictionary [fig.5]; adding a code word to the dictionary, the code word including the partition command sequence as a root, the code word representing the string if the string is obtained in a first iteration [fig.2 and col.4,

lns.12-24]; utilizing the code word in the dictionary to represent the string if the string is not obtained in the first iteration [col.8, lns.8-58].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify both Franaszek and Woodward, and further in view of Seroussi by representing the partition compression code word as a partition command sequence because this feature encoded as a series of codes [Seroussi, col.4, lns.15-17]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to reduce the amount of memory required in a dictionary based compression/decompression system [Seroussi, col.3, lns.20-22].

Response to Arguments

13. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi V Tran
Patent Examiner
Art Unit 2151

NT

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER